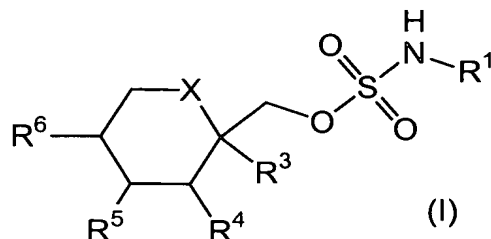


We Claim:

1. A process for the preparation of a compound of formula (I)



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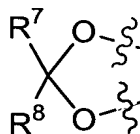
wherein

X is selected from CH₂ or O;

R¹ is selected from the group consisting of hydrogen and C₁₋₄alkyl;

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R³, R⁴, R⁵ and R⁶ are each independently selected from hydrogen or lower alkyl and, when X is CH₂, R⁵ and R⁶ may be alkene groups joined to form a benzene ring and, when X is O, R³ and R⁴ and/or R⁵ and R⁶ together may be a methylenedioxy group of the formula:

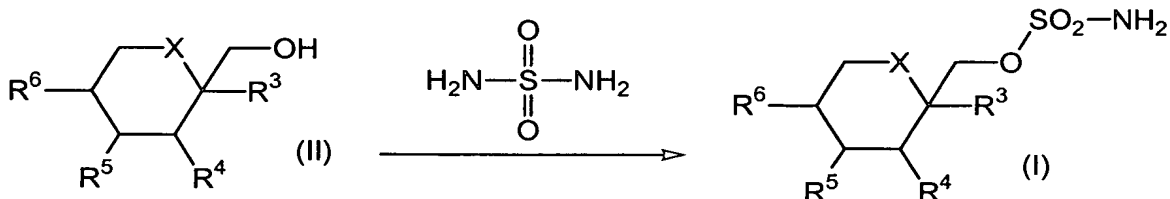


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wherein

R⁷ and R⁸ are same or different and are hydrogen, lower alkyl or are alkyl and are joined to form a cyclopentyl or cyclohexyl ring;

comprising



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reacting a compound of formula (II) with sulfonyl diamide, at an elevated temperature, in the presence of from 0 to about 10% water, to yield the corresponding

compound of formula (I).

2. The process of Claim 1, wherein the compound of formula (II) is diacetone fructose.

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3. The process of Claim 2, wherein the sulfuryl diamide is present in an amount greater than about 0.9 equivalent

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4. The process of Claim 3, wherein the sulfuryl diamide is present in an amount equal to about 1.5 to about 3 equivalents.

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5. The process of Claim 2; wherein the compound of formula (II) is reacted with sulfuryl diamide in the presence of a non-aqueous organic or inorganic base.

6. The process of Claim 5, wherein the non-aqueous organic or inorganic base is a tertiary amine base.

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7. The process as in Claim 6, wherein the tertiary amine base is pyridine.

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8. The process of Claim 5, wherein the non-aqueous organic or inorganic base is present in an amount greater than about 1 equivalent.

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9. The process of Claim 8, wherein the non-aqueous organic or inorganic base is present in an amount equal to about 3 to about 5 equivalents.

10. The process of Claim 2, wherein the compound of formula (II) is reacted with sulfuryl diamide in an

aprotic organic solvent.

11. The process of Claim 10, wherein the aprotic organic solvent is a non-aqueous organic base.

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12. The process of Claim 11, wherein the non-aqueous organic base is pyridine.

13. The process of Claim 2, wherein the elevated temperature is in the range of from about 90°C to about 170°C.

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14. The process of Claim 13, wherein the elevated temperature is in the range of from about 120°C to about 140°C.

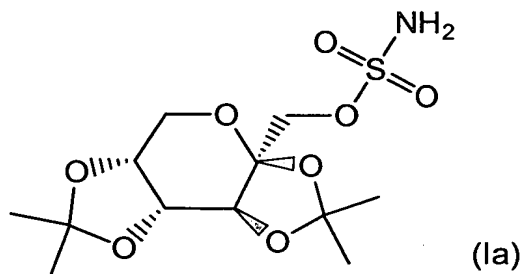
15. The process of Claim 2, wherein the compound of formula (II) is reacted with sulfuryl diamide, in the presence of from 0 to about 3% water.

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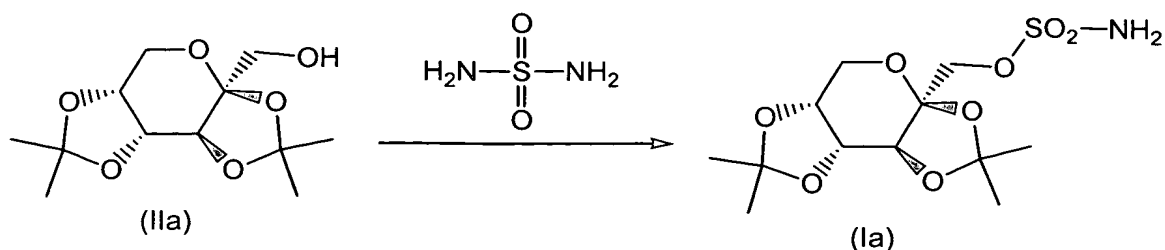
16. A compound prepared according to the process of Claim 1.

17. A process for the preparation of a compound of formula (Ia)

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comprising



reacting a compound of formula (IIa) with sulfuryl diamide, at an elevated temperature, in the presence of from 0 to about 10% water, to yield the corresponding compound of formula (Ia).

18. The process of Claim 17, wherein the sulfonyl diamide is present in an amount greater than about 0.9 equivalents.

19. The process of Claim 18, wherein the sulfonyl diamide is present in an amount equal to about 1.5 to about 3 equivalents.

20. The process of Claim 17, wherein the compound of formula (IIa) is reacted with sulfonyl diamide in the presence of an non-aqueous organic or inorganic base.

21. The process of Claim 20, wherein the non-aqueous organic or inorganic base is a tertiary amine base.

22. The process as in Claim 21, wherein the tertiary amine base is pyridine.

23. The process of Claim 20, wherein the non-aqueous organic or inorganic base is present in an amount greater than about 1 equivalent.

24. The process of Claim 23, wherein the non-aqueous organic or inorganic base is present in an amount equal to about 3 to about 5 equivalents.

5 25. The process of Claim 17, wherein the the compound of formula (IIa) is reacted with sulfuryl diamide in an aprotic organic solvent.

10 26. The process of Claim 25, wherein the aprotic organic solvent is a non-aqueous organic base.

27. The process of Claim 26, wherein the non-aqueous organic base is pyridine.

15 28. The process of Claim 17, wherein the elevated temperature is in the range of from about 90°C to about 170°C.

20 29. The process of Claim 28, wherein the elevated temperature is in the range of from about 120°C to about 140°C.

25 30. The process of Claim 17, wherein the compound of formula (IIa) is reacted with sulfuryl diamide in the presence of from 0 to about 3% water.

31. A compound prepared according to the process of Claim 17.

30 32. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and the compound according to Claim 16.

33. A pharmaceutical composition made by mixing a pharmaceutically acceptable carrier and the compound according to Claim 16.

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34. A process for making a pharmaceutical composition comprising mixing a pharmaceutically acceptable carrier and the compound according to Claim 16.

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35. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and the compound according to Claim 31.

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36. A pharmaceutical composition made by mixing a pharmaceutically acceptable carrier and the compound according to Claim 31.

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37. A process for making a pharmaceutical composition comprising mixing a pharmaceutically acceptable carrier and the compound according to Claim 31.